

Claims

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- Method for managing radio resources in a cellular radio communications system configured as a multi-carrier system, with
 - information being transmitted on at least one frequency band,
 - at least one frequency band having several subcarriers (ST1, ST2, ST3, ST4, ST5, ST6),
- 10 characterized in that
 - the sub-carriers (ST1, ST2, ST3, ST4, ST5, ST6) of the at least one frequency band of each radio cell are temporarily available for the transmission of information
- 15 and
 - the several sub-carriers (ST1, ST2, ST3, ST4, ST5, ST6) of the at least one frequency band are temporarily assigned to a number of radio cells comprising at least two radio cells in such a way that each of the assigned sub-carriers (ST1, ST2, ST3, ST4, ST5, ST6) is available to a subset of the number of radio cells for the transmission of information.
- 25 2. Method in accordance with Claim 1, characterized in that at least one of the assigned sub-carriers (ST1, ST2, ST3, ST4, ST5, ST6) is available to exactly one radio cell from the number of radio cells.
- 30 3. Method in accordance with Claim 1 or 2, characterized in that each of the assigned sub-carriers (ST1, ST2, ST3, ST4, ST5, ST6) is available to exactly one radio cell from the number of radio cells.

- ANT 34 AM Method in accordance with one of Claims 1 to 3, characterized in that the number of radio cells consists of a number of adjacent radio cells.
 - 5 5. Method in accordance with one of Claims 1 to 4, characterized in that with an assignment of the subcarriers (ST1, ST2, ST3, ST4, ST5, ST6) to n radio cells, sub-carriers (ST1, ST2, ST3, ST4, ST5, ST6) available to at least one radio cell have a frequency spacing of n 10 sub-carriers (ST1, ST2, ST3, ST4, ST5, ST6).
 - 6. Method in accordance with one of Claims 1 to 5, characterized in that with the assignment of the subcarriers (ST1, ST2, ST3, ST4, ST5, ST6) sub-carriers 15 (ST1, ST2, ST3, ST4, ST5, ST6) available to at least one radio cell are sub-carriers (ST1, ST2, ST3, ST4, ST5, ST6) adjacent in the frequency band.
 - Method in accordance with one of Claims 1 to 6, 7. 20 characterized in that the assignment of the sub-carriers (ST1, ST2, ST3, ST4, ST5, ST6) takes place in accordance with an algorithm that includes the use of a code.
 - Method in accordance with one of Claims 1 to 7, 8. 25 characterized in that the assigned sub-carriers (ST1, ST2, ST3, ST4, ST5, ST6) are used by the base stations of the particular radio cells for the transmission of broadcast information.
 - 30 9. Method in accordance with Claim 8, characterized in that the broadcast information is used to decide on handovers.

10. Method in accordance with Claim 8 or 9 characterized in that the amplitudes of the broadcast information are determined in the subscriber stations receiving the broadcast information.

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11. Method in accordance with Claim 10, characterized in that a metric of the amplitudes of the broadcast information transmitted from a base station on the sub-carriers (ST1, ST2, ST3, ST4, ST5, ST6) available to it is determined.

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- 12. Method in accordance with one of Claims 1 to 11, characterized in that it is used on an OFDM system.
- 13. Radio communication system of cellular construction, that15 is configured as a multi-carrier system,
 - including at least two radio cells and at least one control device in the network,
 - with at least one frequency band that has several sub-carriers (ST1, ST2, ST3, ST4, ST5, ST6) for transmission of information in the radio cells,

characterized in that

- the at least one control device in a network has means for the temporary assignment of the several sub-carriers (ST1, ST2, ST3, ST4, ST5, ST6) of at least one frequency band to the radio cells in such a way that the sub-carriers (ST1, ST2, ST3, ST4, ST5, ST6) are available to each radio cell for the transmission of information and
- at least one control device in the network has means

 for the temporary assignment of the several subcarriers (ST1, ST2, ST3, ST4, ST5, ST6) of the at
 least one frequency band among a number of radio
 cells comprising at least two radio cells in such a

PRILATE TRACT way that each of the assigned sub-carriers (ST1, ST2, ST3, ST4, ST5, ST6) is available to a subset of the number of radio cells for the transmission of information.

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- 14. Control device of a radio communication system of cellular construction, that is configured as a multicarrier system,
 - having at least two radio cells,
- 10 with at least one frequency band that has several sub-carriers (ST1, ST2, ST3, ST4, ST5, ST6) for the transmission of information in the radio cells, characterized in that
 - it has means for the temporary assignment of the several sub-carriers (ST1, ST2, ST3, ST4, ST5, ST6) of the at least one frequency band to the radio cells in such a way that the sub-carriers (ST1, ST2, ST3, ST4, ST5, ST6) are available to each radio cell for the transmission of information and
- 20 it has means for the temporary assignment of the several sub-carriers (ST1, ST2, ST3, ST4, ST5, ST6) of the at least one frequency band among a number of radio cells comprising at least two radio cells in such a way that each of the assigned sub-carriers 25 (ST1, ST2, ST3, ST4, ST5, ST6) is available to a subset of the number of radio cells for the

transmission of information.